



NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

Editor - Captain Cecil H. Coggins (MC), USN

Vol. 6

Friday, November 23, 1945

No. 11

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Subdural Hematoma: Subdural hematoma was once considered a rare condition and of interest only to pathologists. Actually it is one of the important indications for surgical intervention after craniocerebral trauma.

Gardner, Leary, Munro and others have assumed that the initial lesion is a ruptured blood vessel, with escape of blood into the subdural space. As the

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result of a fall or of a blow to the head, the brain is displaced in the cranial cavity in such a way that there may be tearing of a vein crossing the subdural space. Recently this has been demonstrated experimentally in the monkey by Craig, Sheldon and Pudenz, who have been able to take motion pictures through a lucite calvarium of such a hemorrhage following a subconcussive blow to the animal's head. Usually it is a superior cerebral vein that is torn, but inferior veins to the sphenoparietal or transverse sinuses may be torn. In any case, rupture of a vein where it crosses the subdural space allows the escape of blood into that space. The venous pressure in the cerebral veins is low, and the bleeding usually soon stops spontaneously. As liquefaction of the hematoma in the subdural space begins, the resultant fluid is high in protein content. Since it is separated from the subarachnoid space only by the arachnoid, and later by the newly developing neomembrane on the arachnoid side, and since these are impervious to the large protein molecules in the liquefying hematoma, an osmotic imbalance must exist between the cerebrospinal fluid and the liquefying hematoma with resultant passage of fluid into the subdural space. When the hemoglobin molecules begin to break down, there is a great secondary increase in molecular concentration. Consequently, there is a late secondary tendency for the clot to increase in size. The dura reacts early to the presence of blood in the subdural space, and a neomembrane or capsule forms first on the dural side. Later a more gradual reaction of the arachnoid produces a neomembrane on the arachnoid side of the clot.

Most subdural hematomas are on the lateral aspect of the hemisphere; some are inferior and anterior, others posterior and inferior. They are progressively expanding lesions and must be treated surgically. A burr hole in the parietal region above the ear will disclose practically every clot. Most clots can be satisfactorily evacuated through single or occasionally multiple burr holes; only rarely is it necessary to reflect an osteoplastic flap. Since from 12 to 15 per cent of the clots are bilateral, a burr hole should be made on each side in every case.

In a study of 75 consecutive patients who were operated on, there was a history of trauma in all but three. At times the trauma may be so slight that it is overlooked by the patient, particularly if there is a considerable time interval between the trauma and the appearance of the symptoms. This interval may be brief or it may range up to several months. When intervals of a year or more have elapsed, an intercurrent, although forgotten injury, may be suspected.

Mental disturbance is the most outstanding clinical symptom and is noted in over 90 per cent of the cases. The picture is usually one of progressive confusion finally advancing to stupor or coma. Very often the condition fluctuates markedly. One day the patient may be grossly confused or stuporous, but the next day may be relatively alert. Occasional dramatic recoveries

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from apparently terminal comas may result from intravenous administration of a hypertonic solution of glucose or sucrose, or from spinal drainage. Unfortunately, if the true condition is not recognized, the patient may lapse into a stupor which is permanent, ending fatally.

Neurologic abnormalities in the form of hemiparesis or paralysis, abnormal reflexes or some degree of aphasia are very frequent. These findings often do not appear until late in the development of the condition. Headache, dizziness, or nausea and vomiting are common manifestations.

The spinal fluid is xanthochromic in two-thirds of the cases, although clear spinal fluid does not rule out the presence of a hematoma. However, subarachnoid hemorrhage is often present in brain injuries, and, if the antecedent trauma precedes the spinal puncture by less than two weeks, the xanthochromia must be disregarded. Observation of the spinal fluid findings in a large number of cases of traumatic subarachnoid hemorrhage indicates that the spinal fluid will be clear within from 12 to 14 days after a brain injury.

Papilledema is present in one-half of the cases. Convulsions, often Jacksonian, sometimes generalized, are seen nearly as often as in tumors near the central sulcus. Bradycardia, with a pulse rate below 60, is present in many cases. It is seldom persistent, but is recurrent, and often is noted only by reviewing the hospital chart over a period of several days.

Subdural hematoma has come to be recognized as an important post-traumatic surgical complication. Many cases are still unrecognized. Surgeons should realize that often this condition can be recognized only by making an exploratory burr hole. In any suspected case, bilateral posterior parietal burr holes should be made. If no clot is found, little harm will have been done. This procedure entails minimal operative shock and can easily be done under local anesthesia, supplemented by intravenous anesthesia if the necessity arises. (Editorial, Surg., Gynec. and Obst., July '45)

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Recent Research on Head Injuries: A study of the physical stresses acting on the brain at the moment of a blow has shown that the skull undergoes deformation at the point of the blow. This sudden change in the shape of the skull results in rapid vibrations of the calvaria and intracranial high pressure waves, positive at the site of the blow and negative on the contralateral side. Both of these factors persist for less than one-tenth of a second. A third stress is introduced by the rotatory movement of the brain within the calvaria. This rotatory acceleration produces shearing strains which are particularly severe about the sphenoidal ridge and probably are the cause of contrecoup

lacerations and contusions of the brain. These three stresses also cause physical alterations within certain nerve cells which lead to a depolarization of the cell membrane and a discharge of the nerve cell. The simultaneous excitation of many neurones within the central nervous system is assumed to be the basis of the immediate loss of consciousness. If the trauma has been mild, the recovery of the neurone is rapid, but if the violence has been more severe, the nerve cell may undergo anatomical alterations and necrosis. In addition to neuronal damage, vascular insults usually are produced by the trauma and become manifest as subarachnoid hemorrhage or intracerebral petechial hemorrhages. However, histological neuronal alterations may be demonstrated in nuclei of the brain stem of animals in the absence of any vascular lesions.

Following the initial concussive phenomena associated with the impairment of consciousness and of reflex function, disturbances occur in vasomotor control of the cerebral and systemic circulations. These abnormalities are not prominent when the animal is at rest, but appear when the resting horizontal posture is changed to a vertical one, especially if the head is elevated. Under these conditions the adjustments of the systemic blood pressure are not as efficient as before the concussive blow, and the cerebral circulation decreases. It remains to be determined whether these vasomotor disturbances are the result of edema of the brain or structural neuronal alterations or of both, but they probably are the basis of the immediate, post-traumatic headache and dizziness in man.

Symptoms of long duration, including headache, dizziness, intellectual deficit, personality changes, and emotional and nervous instability, are such frequent sequelae of head injuries that they have been termed the post-traumatic syndrome. A careful analysis of the factors in this syndrome has led to the following conclusions:

(1) Factors related to organic damage of the nervous system, manifested by neurological and electroencephalographic abnormalities and impairment of consciousness, are responsible for prolonged disability in less than one-third of the patients with persistent symptoms.

(2) Factors related to the environment, social or physical, and manifested by emotional disturbances, anxiety states and psychological stresses are more important in producing disability than are organic changes.

(3) Organic and environmental factors frequently are intermingled, the latter usually being of greater weight.

Psychological examinations have been extensively carried out for the purpose of differentiating organic from functional factors. Although such a

separation is possible by several batteries of tests, the procedure at the present time is too complicated and time-consuming for general use, since it takes up to ten hours per patient. Further analysis of these methods may allow a condensation of the tests into a small battery which will be of practical clinical value.

The value of electroencephalography in head injuries has been extensively studied. In most mild cases of cerebral trauma no abnormalities are found in the record, even if it is taken immediately after the injury. If the patient is clear mentally at the time of electroencephalography a few hours after a head injury, the incidence of abnormal records is little higher than in a control group. If consciousness continues to be impaired several hours after a blow on the head, a record made then is likely to be abnormal. Persistent abnormality of electroencephalograms for weeks or months after a head injury may be an indication of developing post-traumatic epilepsy, especially if the EEG disturbance is indicative of a focal lesion. In patients suffering from the post-traumatic syndrome, the electroencephalogram is of critical diagnostic value only when positive. A negative electroencephalogram does not eliminate the possibility of organic brain damage. (OEMcmr-285, Walker, Univ. of Chicago, CMR Bulletin #37)

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Traumatic Pneumocephalus: Pneumocephalus occurs most frequently following fractures involving the sinuses and mastoids. On rare occasions, it is the result of infection by the gas-producing organisms or of an intracranial tumor which has eroded into the nasal sinuses.

Its mechanism is explained by the fact that with coughing, sneezing, swallowing, and blowing the nose, the pressure in the sinuses and mastoids is momentarily increased. This forces air through the site of the fracture or erosion into the cranial cavity. The air may collect in the subarachnoid space, subdural space, brain or ventricles.

Air in the subarachnoid space usually arises from fractures in the posterior ethmoidal and sphenoidal cells, often being accompanied by meningitis, whereas air in the subdural space is more apt to follow fractures through the posterior walls of the frontal sinuses. Air in the brain substances or ventricular system depends upon the extent of adhesions, location of the fracture, and amount of external pressure. Its occurrence is often associated with air in the subdural space.

It is interesting that pneumocephalus, as a rule, develops after a latent period of from several days to several months following fracture. In a series of 24 cases of trauma reported by Dandy in 1926, only 6 showed a pneumocephalus

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before one week; in 3 it occurred before one month, in 10 between four and six weeks, and in 5 at later dates, the latest being after ten months. The reason for this latency is not clear, but it may be that the hemorrhage and edema which immediately follow the trauma prevent the passage of air into the cranial cavity. Later, especially when the patient becomes very active, the possibility that the air may be forced through the lines of the ununited fracture becomes considerably greater. Not infrequently, the factor which precedes the recrudescence of symptoms is blowing of the nose, sneezing, or unusual activity, at times associated with the flow of a clear fluid from the nose. Whether the symptoms are mild or of an increasing severity, systematic roentgenographic examination of the skull will establish the diagnosis without difficulty.

The mortality rate approximates 40 per cent, death usually being due to meningitis. Surgical intervention with closure of the dural wound is indicated in cases which are progressive. (Radiol., March '45 - Garland and Mottram)

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Physiological Effects of Prolonged Starvation: A group of 36 volunteers was maintained on a starvation diet consisting mostly of cereals and vegetables for 23 weeks. The average daily intake was 1700 calories per man, in contrast to a daily maintenance requirement of 3350 calories in the preceding standardization period of 3 months.

There was an average loss of body weight of 37 pounds, amounting to 24 per cent of the initial body weight. The true body weight loss was marked by the presence of edema which was clinically evident in most of the men and which was indicated in all measurements of the extracellular fluid volume (thiocyanate space). A rough estimate of the true body weight loss indicated an average decline of at least 30 per cent.

During starvation, marked bradycardia developed in both rest and work, reaching a basal average low of 35.3 beats per minute in the 13th week; in the 23rd week the basal average was 37.3 beats per minute. The basal metabolism steadily declined to an average intake of 139 c.c. of oxygen per minute compared with the average of 228 c.c. at the end of the standardization period. Associated with the decreases in pulse and B.M.R., there was a slight drop in basal oral temperature from an average of 97.2° F. to an average of 96.9° F. at the end of starvation. Somewhat lower values characterized the mid-period of starvation.

Starvation produced a striking reduction in heart size, moderate declines in systolic, diastolic, and pulse pressures, and a definite drop in venous

pressure. Tilt-table tests indicated little, if any, change in the circulatory response to posture. There was no change in plasma volume, but a decline occurred in hemoglobin concentration of about 20 per cent. The color-cell index was unchanged. Changes in blood chemistry were not remarkable. The plasma proteins declined less than 1 Gm. per 100 c.c., on the average. There were substantial increases in resting lactate and pyruvate. There was a significant decline in blood glucose, especially during work. The volume of urine per day increased to almost twice that of the pre-starvation level. At the same time there was a marked drop in total riboflavin excretion. There was no ketonemia.

Capacity for physical work declined precipitously for all exertion involving more than momentary endurance. Maximal oxygen transport and respiratory efficiency in work both declined sharply. Speed and coordination showed small but definite deterioration. The special senses showed no deterioration. Auditory acuity was actually significantly increased at all frequencies, the change in threshold being lowered about 4 decibels by the "Maico" audiometer.

Repeated detailed examinations of the mouth and teeth failed to reveal any prominent changes. Incidence and development of caries remained normal. No stigmata of vitamin deficiency could be discerned by careful clinical examination. Semen examinations revealed high counts of poorly motile spermatozoa of very low viability. (OEMcmr-27, Keys, Univ. of Minn. - CMR Bulletin #58)

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Beriberi: An Ophthalmic Study in Released Prisoners of War: From a group of 1062 American, Australian, British and Dutch prisoners of war liberated from Japanese internment camps, 123 patients were seen in the Department of Ophthalmology of the U.S.S. CONSOLATION.

Of these patients, 77 had ophthalmoscopic evidence of an optic nerve involvement of a neuritic nature. Among these, there were 18 with optic neuritis of whom 7 had unimprovable amblyopia with an average corrected vision of 20/223. There were 25 cases of post-neuritic optic atrophy of whom 16 had unimprovable amblyopia with an average corrected vision of 20/103. Ten cases had temporal pallor of the optic discs, twelve had blurred borders of the optic discs and twelve were classed as having poor-waxen color of the optic nerve heads.

In the last three groups, normal visual acuity was obtained with suitable correction, except in a few patients who had unusually high astigmatic errors.

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Concentric contraction of the visual fields for white and red, with marked enlargement of the blindspot, was found in those patients who were amblyopic. Normal peripheral fields, with some enlargement of the blindspot, were found in those patients with normal corrected vision. In general, the symptoms corresponded with the objective findings, although the ocular complaints suggested the presence of deficiencies in various other of the essential food factors.

Treatment included full diet, rest, multivitamins given orally, thiamin chloride given parenterally in divided doses, and sodium nitrite, 0.1 Gm., given intravenously, daily. (J. P. Cowen)

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Papillitis in Malaria: Lewy has studied papillitis occurring in patients with malaria. Ocular symptoms were usually mild. Many of the patients claimed that their eyes tired easily. A number stated that they had blurring of vision at about 50 yards (45 meters) so that outlines of objects at this distance were soft and indistinct. Many of these patients had headaches, but this had to be discounted as a symptom common to many patients with malaria who had no ocular changes. Visual loss shown on the Snellen test chart was from 20/15 to 20/20 or from 20/20 to 20/25. One exceptional patient lost vision to 20/100 in the right eye and to 20/400 in the left while under observation.

In these patients, every degree of obliteration of the margin of the optic discs was observed. Hemorrhagic spots on the retina were found in only two patients. One of these had two small hemorrhages in each retina. None of the remaining patients had hemorrhages that could be observed macroscopically. In a number of the patients, it appeared that the loss of distinction between the margins of the discs and the surrounding retinal tissue was due to a heaping-up of edematous retina rather than to any observed changes in the nerve head itself. There was no direct correlation between the degree of edema and inflammation of the optic disc and the size of the blindspot. Some patients, who on ophthalmoscopic examination showed the maximum pathologic changes, had normal-sized blindspots.

The fields of peripheral vision were recorded of those patients having a blurring of the optic disc of 2 or 3 D. In a series of studies on nine such patients, the fields of three were found to be within normal limits. Five of the remaining six showed a 10 per cent loss (concentric) of the visual field; one had a loss of 20 per cent.

It is recognized that by ophthalmoscopic examination the difference between papillitis and papilledema may be slight. It is also recognized that exudate or edema may be present in the neural or supporting tissue of the optic

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nerve as a product either of inflammation or of stasis. However, this condition is considered to be papillitis because of the injected appearance of the nerve head in the majority of the patients, and because many of them showed a disturbance in the ocular physiology, including diminution in visual acuity, reduced peripheral fields and enlarged blindspot scotomata.

The question may be raised as to whether medication may be the cause of papillitis in malaria. None of the patients of this series presented the retinal ischemia, arterial spasm and blindness characteristic of amblyopia due to quinine, which is often the cause of toxic retrobulbar neuritis resulting in complete central blindness and pallor of the disc. One patient presented the characteristic changes of the nerve head although he had never received quinacrine hydrochloride. The great increase in the use of quinacrine hydrochloride coincided with a drop in the incidence of papillitis. This should remove any onus of suspicion from quinacrine hydrochloride as a causative factor. There were many patients with papillitis who never received pamaquine naphthoate. Proof, however, is not absolute in the absence of a control series.

Papillitis is a clinical phenomenon in malaria hitherto scantily described. Papillitis of the optic nerve is a common concomitant of recurrent malaria, but the mechanism of the process is as yet unknown. It is improbable that the condition is a result of medication. Further follow-up studies of the effect of long-term papillitis are indicated. The possibility of late secondary atrophy of the optic nerve from this condition must be given consideration. (War Med., June '45)

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Selection of the Time for Grafting of Skin to Extensive Defects Resulting from Deep Thermal Burns: Large areas that have been deeply burned should be covered with epithelium by means of skin grafts at the earliest suitable opportunity. It is necessary, however, to wait until shock, alterations in body proteins, fluid and electrolyte balance, renal function, edema and "toxemia", have been controlled. Also, it is desirable to delay the grafting until the epithelium has been restored spontaneously to all areas of second degree burn. To wait for large full-thickness defects to epithelize, however, even though they contain small viable epithelial islands that eventually may spread to cover the area, is usually unwise. Grafting should be done sufficiently early to avoid the period of debilitation so often associated with the presence of large granulating areas several weeks after a severe burn. Such areas tend to become infected, bleeding, exuding and painful, leading to extensive loss of protein, sepsis, emaciation and poor morale. Maintenance of nutrition, with particular

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reference to a diet high in protein and vitamin C, is essential, especially if early skin grafting is contemplated. Although early grafting may be done successfully in the presence of mild, localized infection, extensive, spreading or disseminated infection must be controlled before deeply burned areas can be covered with skin. In controlling or minimizing infection, it is necessary that dressings be done infrequently with aseptic precautions and be supplemented by chemotherapy.

It is difficult to designate an exact time that will meet all of these requirements. Some time between the fourteenth and twenty-first days after the burn often will be found to fulfill most of them. The most difficult problem in this particular period is the removal of the burned tissues from those which are viable, in order to obtain a surface suitable for the application of skin grafts. Many weeks are likely to be required for the autolysation or spontaneous casting off of the tissue destroyed by the burn. The elimination of such tissues may be hastened somewhat by the use of chemicals, such as Dakin's solution, or by the use of enzymes or the pyruvic acid method. An alternative method is their removal by surgical excision. This should be done in a fully equipped operating room, preferably at some time in the second or third week following the burn. A general anesthetic is required.

The burned area and surrounding skin are cleaned thoroughly with a detergent solution and are draped with sterile linens. The proposed donor areas are similarly prepared. All necrotic tissue is excised, preserving as much viable tissue as possible. The oozing of blood may be considerable, but is not dangerous if it is kept under control continually by pressure applied with warm saline sponges. Occasionally a few ligatures may be required to control actively bleeding vessels. During the dissection of coagulum and nonviable tissue, care must be taken to minimize injury to remaining viable tissues. This dissection is difficult and slow. It is preferable to apply skin grafts at the same operation if the condition of the patient permits, but occasionally it may be necessary to delay this for a few days.

Skin grafts of intermediate thickness are removed from donor sites, using the Padgett or Blair method, and are fixed to the denuded areas with cotton sutures. If the available donor sites do not provide enough grafts to cover the deficient areas completely, the grafts are cut into small squares ("postage stamps"), from 1.5 to 2 cm. in size, and are placed as near to one another as is possible over the entire defect, but they are not sutured. Donor and grafted areas are covered with a single layer of fine-mesh gauze impregnated with a grease base containing a bland antiseptic ointment, and voluminous compression dressings are applied. When burns are near joints, a light plaster covering may be placed over the compression dressing. If possible, the original dressings

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are left in place for two weeks following the grafting procedure; if it becomes necessary to remove them earlier, the procedure should be done in the operating room, and a compression dressing should be reapplied at once.

Usually the areas that were fully covered with grafts will be healed by about the fourteenth day, but "postage stamp" areas require longer periods for complete epithelization and should be redressed until they are entirely healed. Occasionally, supplementary skin grafting may be required. Grafted areas must be protected from injury for several weeks or months. (Ann. Surg., March '45 - McCorkle and Silvani)

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Resplitting Split-Thickness Grafts: In order to cover a large skin defect with a relatively small amount of donor skin, Zintel has used "split-split" grafts. The principle of this method is to split a Padgett skin graft into layers. The donor skin is cut as thick as possible without interfering with the regeneration of the epithelium of the donor area. In adults, this depth ranges from 0.020 to 0.028 inch. In children, and when the abdomen or medial surface of the thigh is used in women, the depth of the graft is limited to between 0.012 and 0.018 inch. When the graft has been cut and the skin is still adherent to the dermatome drum, the knife blade is adjusted to half the original distance from the drum. Rolling or separation of the leading edge of the skin from the dermatome is prevented by passing over the first quarter of an inch of skin before adjusting the knife blade to the proper distance for resplitting the skin. At times it is possible to cut a Padgett graft into three layers. Thus the skin from a given donor area may be used to cover an area 2 or 3 times as large as itself. The individual split-split grafts may vary in thickness from 0.006 to 0.012 inch. The inner layer of a split-split thickness graft becomes completely epithelized in about the same period as is required for epithelization of the Padgett donor area. In five or six patients, 90 to 100 per cent of the split-split thickness grafts remained viable. In one case in which an ordinary Padgett split-thickness graft was unsuccessful, split-split thickness grafts were also unsuccessful. (Ann. Surg., Jan. '45)

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Nylon Backing for Dermatome Grafts: For some months, Green and his associates have been using a fine-gauge nylon cloth for dressing donor sites at skin-grafting operations. A trial of this cloth, in place of cellophane for skin-graft backing, showed that it had qualities that made it desirable for this purpose. In the first place, it never wrinkles on the dermatome drum. Secondly, it sterilizes as easily as any textile and does not need special packing

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in the sterilizer to prevent adjacent surfaces from becoming adherent, as does cellophane. It is physically unchanged after sterilization. In spite of its relative limpness before being attached to the skin, it prevents contraction of the graft as well as does cellophane or sutures. Grafts backed with nylon conform better to irregular surfaces than do those backed with cellophane. In addition, it has been possible to cut the skin 0.2 mm. thick. Such grafts are slightly thinner than those that can be successfully cut and handled without backing. The donor sites from which such thin grafts have been taken heal quite rapidly and can be used again in a relatively short time. On all areas where split-thickness grafts are indicated, grafts of this thickness have given satisfactory end results. (N. Eng. J. Med., Aug. 30, '45)

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Absorbable Gelatin Sponge and Fibrin Foam for Hemostasis in Neuro-surgery: In experiments using dogs, fibrin foam and an absorbable gelatin sponge have been applied to adjacent lacerations of the superior longitudinal sinus. No adverse effects resulting from the application of either substance have been observed clinically. Histologically, both substances are absorbed in from 4 to 6 weeks.

Clinical trial of the gelatin sponge was carried out in 291 cases by a group of neurological surgeons who cooperated in this investigation. In only 8 of these cases was the sponge considered unsatisfactory, and in most of these instances some extraneous factor was found to have played a part. In 134 cases, the gelatin sponge was considered superior to fibrin foam, in 3 cases inferior to it, and in 58 cases equally satisfactory.

The investigations demonstrate that gelatin sponge is a safe and efficacious medium for the application of thrombin as a hemostatic agent in neuro-surgery. (OEMcmr-76, Pilcher and Meacham, Vanderbilt Univ., Ms. for publication - CMR Bulletin #53)

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Herpes Simplex and Herpes Zoster: Herpes simplex and herpes zoster are diseases characterized by vesicular lesions. Except for the similarity in name and except for some very superficial clinical resemblances, these two skin diseases have nothing in common and are distinct entities of different etiology. Certain characteristics which are important in their differentiation are indicated as follows:

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HERPES SIMPLEXHERPES ZOSTER

<u>Common Names</u>	Fever blister, cold sore.	Shingles, zoster.
<u>Frequency</u>	Very common.	Less common.
<u>Site:</u>	Any part, often lips, face, genitalia; infrequently along distribution of nerves (herpes simplex zosteriformis).	Along distribution of nerves, often intercostal or first of trigeminal.
<u>Etiology</u>	Virus, readily demonstrable by corneal inoculation of rabbit (keratitis dendritica).	Not proved. Probably virus, perhaps related to chicken pox.
<u>Immunity</u>	No immunity. Recurrences common, often in the same sites.	Generally (perhaps always) followed by lasting immunity.
<u>Sequelae</u>	Generally none; local scarring in recurrent attacks. In rare instances, encephalitis and its sequelae.	Persistent neuralgias, particularly in older people. Sometimes local scarring and pigmentation. Occasionally long-lasting disturbances of sensory and/or motor nerves (paresthesias, palsies). In rare instances encephalitis and its sequelae.
<u>Trigger</u>		
<u>Mechanism</u>	Attacks occur "spontaneously" or are brought on by fever, infections (colds, pneumonia, meningitis, etc.), exposure to elements (light and wind); in some persons by certain drugs, foods (shellfish, chocolate, nuts, etc.).	Attack usually spontaneous, without demonstrable cause - sometimes apparently contracted from other cases of zoster or chicken pox.

Herpes Simplex: The role of multiple factors acting synergistically to produce a single disease is nowhere more clearly apparent than in herpes simplex. Frequently a trigger factor is indispensable to the establishment of the disease by the probably ever-present virus. Thus in some individuals a new exposure to the sun, in others ingestion of certain foods, in others the taking of iodides, will apparently at any time elicit the viral disease.

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Keddie et al (J.A.M.A., Oct. 18, '41) observed the appearance of herpes simplex in a series of subjects under controlled elevations of body temperature. Following artificial fever therapy, herpes simplex developed in 70 per cent of 321 patients. In different groups the incidence was directly related to the height of the fever.

The enlarging concept of herpes simplex includes recognition of the role of the virus in certain recurrent vesiculo-pustular eruptions of the fingers, in certain vesicular and itching eruptions of the bearded area (herpetic syccosis), in certain forms of aphthous and acute febrile stomatitis, in varicelloid, pustular and febrile eruptions occurring in scratched eczemas and in other dermatoses with pruritus (Kaposi's varicelliform eruption). There is some evidence that the virus may be concerned in still other conditions, including some cases of mild encephalitis. It may possibly be found to be the etiological factor in other diseases of obscure etiology.

Local treatment of herpes simplex is best accomplished by wet compresses (e.g. boric acid, saturated solution; or alcohol and water aa; or alcohol and camphor water aa; or alcohol and witch hazel and water aa.) Powders or powdery lotions may be helpful after the small frail vesicles have burst: Navy issue foot powder (Supply Table #13-095); or Rx 25 Lotion, Manual of Dermatology (Second Printing), Page 375. In the later dry and crusting stages, an emollient ointment, such as boric ointment or petrolatum may be pleasant. One of the most important features of herpes simplex is that the lesions may serve as the portal of entry for other infections including impetigo and syphilis. The danger of infection by venereal disease is of course greater when the lesion of herpes simplex is located on the genitalia.

Unless recurrences are known to be due to certain trigger factors which can be excluded, prevention is often unsuccessful. Protection of the lips and other known susceptible areas against sun and elements by the use of a chapstick (Supply Table #S1-2810) or sunburn protective cream (Supply Table #S1-3382) is advisable. When trigger factors cannot be found and excluded and when the recurrences are distressing, severe, frequent, or cause scarring, repeated vaccinations with ordinary smallpox vaccine may be tried. This procedure interrupts recurrences in some cases. From 10 to 12 successive vaccinations should be given from one week to 10 days apart, using the multiple puncture method.

Herpes Zoster: Herpes zoster requires no prevention, since there are no recurrences. In differential diagnosis a search should be made for leukemia, or other dyscrasias, cancer or a history of exposure to arsenicals. When lesions occur over the distribution of the first branch of the trigeminal nerve, it is important to note the appearance of corneal ulcers and immediately to

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institute proper ophthalmologic treatment. Lotion of Rx 25, Manual of Dermatology, Page 375, or calamine lotion may be used locally on the skin lesions.

The neuralgic pain may occasionally be excruciating and persistent, particularly in older persons. Various treatments which have been recommended include daily subcutaneous injections of obstetrical pituitrin, intravenous injections of sodium iodide, as well as intramuscular injections of from 10 to 20 c.c. of autogenous blood. Demerol, opiates, salicylates, barbiturates, etc., may have to be used, sometimes in large doses, over long periods of time.

(M. B. Sulzberger)

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Serological Findings in Blood Donors: Examination of 210,261 Red Cross donor bloods disclosed 489 or 0.23 per cent "unsatisfactory" - that is, seropositive in tests for syphilis (Kahn, Kolmer check).

Of 79 essentially unselected donors with positive serological tests submitted to further extended clinical, serological and other special studies, only 40 per cent were finally adjudged by a reviewing board to have syphilis. The time required for a decision was less than 3 months in 69 per cent of the syphilitics, and more than 3 months in 78 per cent of the nonspecific positives. History and physical examination contributed little to differentiation of syphilitic and nonspecific positives.

Asymptomatic neurosyphilis and congenital syphilis were the 2 types of the disease, other than monosymptomatic seropositive latency, uncovered.

Precipitation tests tend to be unreliable unless matched against complement fixation tests. The syphilitic positive has a high titer, is consistently positive on multiple repetition, with precipitation and complement fixation confirming each other. The nonspecific test has a low titer, is usually weakly (sometimes strongly) positive or doubtful, but fluctuant, and there is inconsistency between precipitation and complement fixation, with a tendency to be more positive in the former than in the latter and with the further tendency toward a negative result on weekly repetition within a 3 months' period.

Doubtful cases should be kept under prolonged observation. Even at the end of a year the diagnosis may still be undetermined. (OEMcmr-401, Stokes et al, Univ. of Pa., Ms. for publication - CMR Bulletin #57)

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Electroencephalographic Changes Following Penicillin Treatment of Syphilis:

The electroencephalograms of 38 patients suffering from neurosyphilis were studied before and after penicillin treatment. No correlation was found between the severity of the disease and the presence or absence of EEG abnormalities.

After penicillin treatment (4 million units within 10 days), many formerly abnormal EEG's became normal and most of the remaining records showed varying degrees of improvement. No invariable correlation existed between the clinical results of the treatment and the EEG changes.

The abnormal EEGs are interpreted as being the consequence of local cerebral anoxia and of generalized or localized cerebral inflammation. Many of these abnormalities are apparently reversible. (OEMcmr-446, Callaway et al, Duke Univ., Ms. for publication - CMR Bulletin #54)

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The Problem of Recurrence of Rheumatic Fever: In the rheumatic state, any flare-up of symptoms or signs, no matter how mild, indicates activity of the condition and must be regarded as a recurrence. The usual triad of fever, arthritis and myocarditis is most significant of activity, but chorea, erythema annulare or other evidence may occur alone.

It seems important to differentiate the major and minor types of recurrence as they may be entirely different, not only in degree, but in importance. Acute recurrence usually follows a streptococcal infection, is violent in nature and may be just as severe as the original attack. There is fever, arthritis and evidence of myocarditis. Tachycardia, changes in heart sounds or electrocardiographic abnormalities are also present.

Subacute recurrences may be very mild and are easily overlooked. They usually consist of arthralgia or evidence of synovitis, transient fever with malaise or skin lesions and temporary A-V conduction delay or T-wave changes. The sedimentation rate may not be elevated.

The rate of recurrences among men following induction into the Navy is not available at present. Sampling of several hundred men under observation with rheumatic fever reveals that about 25 or 30 per cent had the disease one or more times prior to induction. This means that episodes were acute. During their subsequent convalescence, however, even though many of those men had additional recurrences, these were all of a subacute character. It has further been noted that among those men who have been returned to duty and who subsequently sought medical attention because of their rheumatic symptoms, practically none were acute cases. Actually only four out of the 100

were acutely ill, 83 complained of joint pains and the remainder had subjective cardiac complaints.

Whether post-rheumatic arthralgia and synovitis, which usually appear after marked increase in activity of the affected joint, represent an actual recurrence may be doubtful, but rheumatic pains of any type when found in the rheumatic state represent a departure from the normal and hence imply activity and so "recurrence". Such subacute recurrences are very frequent.

The type and severity of a recurrence are direct indices of the activity of the rheumatic state. They determine the course and prognosis of the individual's disease by revealing his sensitivity to the etiological agent. A monocyclic attack, if not followed by any residue, may well never recur, but polycyclic attacks, whether acute or subacute, are increasingly likely to recur.

Evidence of cardiac valvular damage may appear in the course of time, irrespective of the number of recurrences, and many cases without any previous sign of activity develop valvular murmurs while under observation. Cases with arthritic complaints are less likely to develop valvulitis, but the more closely and the longer rheumatic subjects are watched, the more often valvulitis is found.

The treatment of recurrences in no way differs from the treatment of the primary attack. Salicylates seem to be of benefit only if joints are really hot and swollen. They do not seem to relieve simple arthralgia. The matter of bed rest in recurrences is a moot point, but in general it is only necessary to keep a patient in bed as long as signs of activity are present, and as long as subjective symptoms seem to warrant. If total rest were demanded of every man who has joint pains, many would have to spend the rest of their lives in bed. Methyl salicylate rubs give great comfort and should not be overlooked.

Simple hygiene, dust control, and avoidance of chilling, fatigue and exposure to respiratory infections must all be put in effect if recurrences are to be avoided.

The role of the hemolytic streptococcus in the development of the allergic state responsible for the rheumatic syndrome will be considered elsewhere. Suffice it to say here, that acute recurrences bear the same relationship to the streptococcus. It is quite evident that minor respiratory infections, overexertion and chilling play some part in reactivating the dormant process; but often no factor can be found to account for subacute recurrences. However, severe fulminating recurrences, as in the case of alarming primary attacks, are much more likely to occur in the wake of virulent streptococcus infection than in the wake of a minor episode. (U. S. Nav. Hosp., Corona, Calif. - Bingham et al)

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Capillary Fragility in Rheumatic Fever: Rheumatic fever is not generally recognized as a vascular disease, although it is known that blood vessels may be affected. Clinical findings indicating such involvement include epistaxis, purpura and various erythemata. When death occurs during the acute stage of rheumatic fever, post-mortem examination may reveal inflammatory changes in many arteries. The synovial membranes of inflamed joints show hyperemia, edema and sometimes petechiae. Such changes are usually considered as incidental findings rather than as representing the disease process itself.

The Rheumatic Fever Service of the U. S. Naval Hospital, Corona, California, has studied capillary fragility in patients convalescent from rheumatic fever. The results of this investigation indicate that the minute vessels are generally damaged, as evidenced by their increased permeability to red blood cells.

Capillary fragility was measured by applying pressure to the upper arm by means of a blood pressure cuff inflated to a pressure of 100 mm. of mercury. The time was noted at which numerous petechiae appeared distal to the cuff. In a control group of 25 subjects, apparently healthy or with diseases in which capillary fragility is expected to be normal, approximately 50 per cent had weakly positive tests within an average value of 11 minutes.

Twenty-seven patients convalescing from rheumatic fever had no spontaneous purpura and no history of it. Tourniquet tests were positive in 80 per cent of these, with an average time of 10 minutes. The average time of patients with sedimentation rates over 10 mm./hr. was somewhat below that of patients with sedimentation rates below 10 mm./hr.

Nineteen patients convalescing from rheumatic fever had spontaneous purpura at the time when capillary fragility was measured, or within three weeks of that time. Tourniquet tests were positive in seventeen patients (90 per cent). The average time of all positives was seven minutes. From these results, it is evident that vessels of this group had the greatest fragility, those of the rheumatic fever group without spontaneous purpura the next, and those of the controls the least.

Platelet counts were made on five patients in the group with spontaneous purpura. They varied from 145,000 to 416,000 per mm. Bleeding times taken in seven cases varied from 3 to 5 minutes, and clotting times from 1.5 to 6 minutes (capillary method). Five prothrombin times, by the Quicke method, were all normal.

Six patients with markedly abnormal capillary fragility, most of whom had spontaneous purpura, were treated with Hesperidin, "Vitamin P". The dosage

of 0.5 Gm. was administered orally three times a day for from ten to fourteen days. Capillary fragility was measured before, during and after the period of medication. In all, fifty-three measurements of capillary fragility were made. No decrease in spontaneous purpura or in measured capillary fragility resulted. (U. S. Nav. Hosp., Corona, Calif. - Montgomery)

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(Not Restricted)

Epidemiological Study of Schistosomiasis Japonicum: An opportunity to study schistosomiasis japonicum in a previously unexposed group was afforded when American troops became infected after landing on Leyte, P. I., in October 1944. One hundred and two proven cases of schistosomiasis occurred in a combat engineer battalion whose activities were followed closely throughout its stay in a highly endemic area. Sixty-three of the men were hospitalized because of clinical symptoms, and the remaining thirty-nine were hospitalized after surveys of the battalion for eosinophilia had been made. Eosinophil survey is believed to be of definite value in screening large groups for cases of schistosomiasis. An eosinophilia of 30 per cent or over was used as the criterion for transfer for further study in the hospital.

The experience of these engineer troops showed that the risk of acquiring schistosomiasis in line of duty is closely related to the activities of the unit and the degree of exposure to infested water. Practically every member of the battalion had the opportunity to swim in infested streams, and many admittedly did so, but the vast majority of the infected soldiers were from platoons engaged in bridge repair and construction. Among these platoons, the rate of infection varied from 71 to 89 per cent, rates which might have been raised to almost 100 per cent if all the men had been hospitalized for careful study.

Failure to find the snail intermediate host, Oncomelania quadrasi, is no criterion of the safety of the stream in question. The breeding places of the snails in grassy marshes and small tributary streams may be nearly a mile above the point at which troops become infected. Since the cercariae live for from fifteen to thirty hours and attach themselves to the surface film after emergence, they may be carried passively for considerable distances within a few hours by moving water.

The study showed the need for a cercaricidal substance for application to the skin and clothing. Rubber boots or other protective equipment should be provided for all troops forced to work in surface water in known or suspected endemic areas. Education of troops and strong command action to prevent exposure by swimming, bathing, and the washing of clothing and equipment in surface waters should be instituted. (Bull. U. S. Army M. Dept. - Nov. '45)

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(Not Restricted)

Combined Control of Schistosomes and Mosquitoes with Materials Available in the Field: Inasmuch as cercariae, snails and mosquito larvae are likely to occur in the same water, the Naval Medical Research Institute has completed a study of preparations effective against all three. Using materials and equipment available in the field, tests showed the most effective preparation to be as follows:

- (A) One part of Phemerol mixed with two parts of a saturated solution of copper sulfate in water.
- (B) Seven parts of diesel oil emulsified with (A) by means of alternate periods of agitation and standing.

In the laboratory, this preparation was found to be effective in dosage equivalents as low as five gallons per acre. In any dosages larger than this minimum, the preparation should be effective against snails above the water line, against mosquito larvae at the surface, and against snails and cercariae below the surface.

The copper sulfate and Phemerol are in the water phase and quickly disperse throughout the water treated. They are less irritating to the skin than cresylic disinfectants and are of low toxicity in drinking water. The effect of the combination of copper sulfate and Phemerol on field equipment is, however, not known.

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(Not Restricted)

Cerebral Manifestations of Schistosomiasis Japonicum: Unusual manifestations of early schistosomiasis due to S. japonicum have been observed in soldiers who contracted the disease on the island of Leyte. Seven cases have been reported in which severe cerebral disturbances were attributed to the deposition of eggs in the central nervous system. Confusion, disorientation, memory defects, aphasia, and hyperreflexia were prominent. Muscular flaccidity, present at first, was quickly replaced by spasticity. Sensory disturbances were present in only one case. The patients recovered, but some residual changes were present at the end of three months. (Bull. U. S. Army M. Dept., Nov. '45)

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Surgical Aspects of Intestinal Amebiasis: Intestinal amebiasis is the disease of major surgical importance in endemic areas. With the return of the forces from the East, examples of this condition must be expected in the United States.

(Not Restricted)

The clinical and radiological manifestations of the localized forms of intestinal amebiasis may be indistinguishable from those of surgical disease, acute or chronic. It is usually possible to find the Endamoeba histolytica in the stools; specimens obtained at sigmoidoscopy may contain the amebae when the stools do not. The response to emetine is of considerable diagnostic significance, but occasionally the condition is resistant to the drug, and exploration or biopsy is then required. The possible coexistence of amebiasis with other lesions must not be overlooked.

Perforation of an amebic ulcer is to be expected in less than 3 per cent of cases. It is most often associated with fulminating infections. Toxemia may mask the clinical signs, and if gangrene is present the prognosis, even with surgery, is poor.

The clinical features of acute cecal amebiasis and acute appendicitis have much in common; the differential diagnosis may present great difficulty, but in view of the special risks of operation in cases of cecal amebiasis, every endeavor should be made to make a clinical diagnosis. If exploration proves necessary, manipulation of the cecum should be avoided as far as possible, and unless the appendix is obviously in a dangerous condition, it should not be removed if amebiasis is found; emetine should be given at once after operation.

In any case with an inflammatory mass, however suggestive of acute appendicitis, operation should not be advised until every effort has been made to exclude cecal amebiasis. Amebic appendicitis is regarded for purpose of diagnosis and treatment as an extension of cecal amebiasis. Unless complicated by abscess or perforation, it is a medical disease.

Unsuspected intestinal amebiasis and post-dysenteric conditions of non-appendicular origin often give rise to symptoms very suggestive of chronic appendicitis. Before appendectomy is undertaken these conditions must be carefully excluded. Operation is occasionally required for residual appendicular involvement following cecal amebiasis.

Examples of localized, chronic amebic colitis and ulceration of the rectum which may be mistaken for carcinoma or other surgical conditions are common in endemic areas. Minor anorectal conditions, such as piles, fissure, and fistula, may result from unsuspected mild or chronic amebiasis.

With few exceptions, abdominal or rectal operations are strongly contraindicated in patients suffering from intestinal amebiasis; they are often followed by serious complications peculiar to this disease. If operation is necessary, or if amebiasis is discovered at exploratory operation, the administration

(Not Restricted)

of emetine should not be delayed. Appendicostomy and cecostomy have no place in the treatment of this condition. (Surg., Gynec. and Obst., Oct. '45 - Hawe)

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(Not Restricted)

Virus Myocarditis: A filter-passing agent that produces lethal myocarditis in anthropoid apes, mice, guinea pigs, and rabbits has been described by Helwig and Schmidt of the A.A.F. Regional and Convalescent Hospital, Miami Beach, Fla. The first case of anthropoid myocarditis was observed in a previously well adult male gibbon which suddenly dropped dead. The animal had not shown paralysis. Necropsy revealed a dilated heart, pericardial effusion and pulmonary edema. The remaining viscera were normal. Six weeks later a 5-year-old, well-nourished, male chimpanzee from the local Anthropoid Ape Research Foundation also died suddenly. The previous history also had been negative, and the same gross and microscopic findings were recorded as in the case of the gibbon.

Fluid from the chest cavity of this chimpanzee was inoculated intravenously, intracranially or intraperitoneally into a series of mice. The mice developed paralysis by the fifth day and were all dead by the sixth day. Microscopic examination revealed acute myocarditis in all cases. As a control, chest fluids from 2 chimpanzees dying from other causes were similarly inoculated into mice, none of which developed symptoms or showed lesions of the myocardium when later killed.

The hearts from the first series of injected mice were ground in ascitic fluid and used for intravenous and intraperitoneal inoculation into a second series of mice. Half of the second series developed fatal myocarditis. Suspensions of the heart from the lethal cases were similarly injected into a third series of mice, all of which developed fatal myocarditis. By this technic the causative agent has been propagated through the fifth mouse passage with continual increase in mouse pathogenicity. The agent will pass through a Seitz or Berkefeld filter and will also produce interstitial myocarditis in guinea pigs and rabbits. These animals, however, usually do not show an accompanying paralysis.

The virus is present in infective concentration in the nasal washings of inoculated mice. Mice may be readily inoculated by intranasal instillation. The agent is readily cultivated in chick embryos and will withstand heating at 56° C. for twenty minutes. It is completely destroyed, however, by heating at 70° C. for a similar time.

Demonstration of the viral etiology of anthropoid myocarditis is of clinical interest since this disease in apes is strikingly similar to certain sporadic

(Not Restricted)

cases of human acute interstitial myocarditis of unknown etiology. As far as is known, the virus of anthropoid myocarditis has not been previously described. The only virus previously described which may be related is that isolated from rheumatic endocarditis by MacNeal and his associates of the New York Post-Graduate Medical School. Therapeutic and electrocardiographic studies of experimental viral myocarditis of rabbits and guinea pigs are now in progress in the Miami Beach Laboratory. (Editorial, J.A.M.A. - Sept. 15, '45)

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(Not Restricted)

The Central Nervous System in Uremia: Uremia, although usually treated by the internist, occasionally results in symptoms that may cover the entire field of neuropsychiatric symptomatology. The most common symptoms referable to the nervous system are convulsions and coma, but in isolated cases, unusual syndromes, such as monoplegias, asphasias and apraxias, or even mental symptoms of almost every type, may be present. In cases of uremia, there are widespread tissue changes in the central nervous system, involving both the nerve cells and the parenchymal elements. In the acute illness, the predominant alteration occurs within the cortical neurons, which indicates an acute change in the nerve cells. In the more chronic illness, the most striking changes are parenchymal rather than neuronal, and they consist of focal and perivascular areas of demyelination and necrosis. The neurons show both acute and chronic changes in the more chronic illness. (Arch. Neurol. and Psychiat., Aug. '45 - Knutson and Baker)

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Bacitracin, a New Antibiotic Substance: A new antibiotic, "bacitracin", has been recovered from a strain of the B. subtilis group of organisms. It is neutral, water soluble, nontoxic, and relatively heat stable. In vitro it is active chiefly against gram-negative organisms, including the gonococcus and meningococcus. It is also active against experimentally-produced hemolytic streptococcal infections in mice, and gas gangrene infections in guinea pigs. (OEMcmr-80, Johnson et al, Columbia Univ., Ms. for publication - CMR Bulletin #55)

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(Not Restricted)

Louse Infestation of Troops on Board Naval Vessels: Reports received in the Bureau indicate that on at least one occasion a senior medical officer on a naval vessel carrying Army personnel failed to notify port authorities of

(Not Restricted)

cases of louse infestation treated while enroute to the port of debarkation. Since louse infestations may reappear after apparent cure, reporting of such cases to port authorities may preclude complications before troops have been moved to reception centers. Outbreaks of communicable diseases occurring on naval vessels transporting Army and other service personnel also should be reported to port authorities.

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(Not Restricted)

Plant Specimens Desired by National Museum: The U. S. National Museum is very much interested in receiving shipments of certain plant specimens from overseas. A wide variety, including marine algae and diatoms, is desired to augment the Museum's present collection.

Personnel of the Navy, many of whom are serving in remote and little-frequented areas, may make valuable contributions to scientific knowledge by collecting plant specimens, including poisonous varieties and those used in native medicine, for shipment to the United States.

The material should be collected in accordance with standard botanical procedures, as described in the Field Collector's Manual in Natural History issued by the Smithsonian Institution and available free to service personnel upon request. Bundles of pressed and dried specimens should be securely tied with a protecting stiff cardboard on top and bottom if possible. They should be wrapped in waterproof paper or packed in cartons, and may be addressed to:

Medical Officer in Command
National Naval Medical Center
Attn: Division of Plants, U.S. National Museum
Bethesda 14, Maryland

Packages up to 70 lbs. may be sent franked.

There are no plant quarantine restrictions on the sending of such packages, provided they do not contain rice straw or unprocessed cotton.

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(Not Restricted)

New Medical Training Films: Since the publications of BuMed's Catalog of Training Films and Other Medical Training Aids in May 1945, the following

(Not Restricted)

films have been completed and are available to all medical activities through the Training Aids Sections and Libraries:

Surgery: MN-2477b Removal of Intra-ocular Foreign Bodies
 MN-2477c Field Management of Eye Injuries
 MN-2715a Early Care of Plastic Surgical Cases:
 Wounds of the Hand
 MN-6128a Plastic Surgery of the Hand

Rehabilitation: MN-4330a Voyage to Recovery
 MN-4330b The Road Ahead

Personal Health: (Advanced Base Personnel)
 MN-2808d Native Food
 MN-2808e Cleaning Mess Gear
 MN-2808f Personal Cleanliness
 MA-6399 Venereal Disease Prophylaxis
 (for negro audiences)

Tropical

Disease Control: MN-4049 Plague Control
 MN-5041a Tsutsugamushi: Prevention

Medicine: MN-4393 Hemolytic Streptococcus Control

Aviation Medicine: MN-3462 Night Vision for Airmen

Training: MN-3731 Film Tactics

(Personnel Div., BuMed - D. F. Smiley)

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(Not Restricted)

Refresher Courses: The George Washington University School of Medicine is offering a series of postgraduate refresher courses designed primarily for medical officers returned from the Services. The series includes a short, intensive, general review course of nine weeks' duration, one-year courses in certain of the specialties, and Preceptorships in certain of the specialties.

For further information apply to the Director of Postgraduate Instruction, George Washington University School of Medicine, 1335 H Street, N. W., Washington 5, D. C.

(Not Restricted)

Physician and Dentist for Leprosy Settlement: Vancancies exist in the positions of Assistant Physician, and Dentist for the leprosy settlement at Kalaupapa, Hawaii. Married men are preferred, but no children under 18 years of age are permitted in the settlement. The salaries for these positions are about \$400 monthly, with full subsistence. Persons interested may communicate with Doctor Norman R. Sloan at Kalaupapa Settlement, T. H.

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(Not Restricted)

To: All Ships and Stations.

BuMed:Y:AVR

Subj: Antiluetic Treatment of Personnel Prior to
Transfer for Separation.

P3-5/P3-1

30 October 1945

Ref: (a) BuMed ltr. BuMed:WM:CM, L8-2/JJ57(042-43), of 18 May 1945; N.D.
Bul. of 31 May 1945, 45-559.

1. In order to protect both the health of personnel being separated from the naval service and the public health, and to expedite separations from the service, it is essential (1) to preclude the possibility of personnel who require further antiluetic treatment from reaching separation centers and (2) to obviate the necessity for continuation of treatment by civilian facilities immediately after separation.

2. It is advised, therefore, that all personnel who are now receiving, or in the future may require, antiluetic therapy be given satisfactory treatment (as defined below) before transfer for separation.

3. For the purposes of this letter, satisfactory treatment is defined as either:

(a) Completion of a 26-week schedule of arsenic and bismuth therapy or its equivalent; or

(b) Completion of penicillin therapy as authorized in reference (a), paragraph 4-i.e., 2,400,000 units in 7 1/2 days (40,000 units every 3 hours for 60 injections).

4. It is urged that in the case of personnel receiving arsenic-bismuth therapy who are, or who it is anticipated will shortly become, eligible for transfer for separation be given the penicillin course if the arsenic-bismuth schedule cannot be completed without delaying transfer.

--BuMed. Ross T McIntire.

ALNAV 330

BuPers

(Not Restricted)
9 October 1945

Subj: Point Score for MC Officers.

Effective 1 November 1945, this Alnav cancels the point score provided in paragraph 13(a) of Alnav 252-45 for male officers MC and establishes a new critical score for discharge or release to inactive duty of 53 points.

--SecNav. A. L. Gates.

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To: All Ships and Stations.

(Not Restricted)
BuMed-E-LG
A2-2/EN10

Subj: Historical Supplement to Fourth Quarterly Sanitary Report, Cumulative Report for Period of World War II. 10 October 1945

Ref: (a) BuMed ltr. BuMed-Y-BHL, A2-2/EN10, of 30 Nov. 1944; AS&SL
Jul-Dec. 1944, 44-1389, p. 239.

1. With the termination of the war it has been decided, in accordance with general naval policy, to complete within the next few months the historical accounts of Medical Department activities during World War II. Reference (a) is therefore modified in regard to the 1945 report, to the extent that the "supplement to the fourth quarterly sanitary report, historical data" will be prepared as a cumulative account of the experiences of the medical department of each ship or station during World War II. This report, insofar as records are available, should begin with the Pearl Harbor attack on 7 December, 1941, or with the commissioning of the activity if such date is subsequent to 7 December 1941, and continue through 31 August 1945. Subject reports shall be submitted in time to reach the Bureau of Medicine and Surgery by 1 December 1945.

2. With variations according to the type or function of the ship or station, historical data should be summarized under the following headings:

(a) Chronology - tabular statement giving specific dates, places and outstanding events associated with the history of the ship or station.

(b) Organization - organization of the activity and its position in the naval chain of command.

(c) Narrative account - medical activities of the ship or station, and battle experiences, with emphasis on how the medical organization functioned and its position in the naval chain of command rather than on clinical medicine and surgery. The account must be complete and accurate, and shall be given whatever classification is necessary for security purposes.

(Not Restricted)

(d) Additional data - sidelights, whenever applicable, upon care of the sick and wounded; evacuation; noteworthy incidents in relation to epidemic diseases; clinical and professional notes, including data relative to preventive medicine, clinical practices, employment of and results from new improved drugs, and noteworthy cases; special problems or noteworthy adaptations with regard to supplies and equipment; interesting incidents to illustrate particular points; and any other topics believed to be important in the medical history of the station, hospital, or Marine Corps activity.

(e) Conclusion - summary of the most effective and least effective portions of the local medical program.

--BuMed. Ross T McIntire.

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(Not Restricted)

To: All Ships and Stations.

Pers-319-MLB, P2-5
3 October 1945

Subj: Physical Examination of Officers 50 Years
of age and Over.

1. Boards of medical officers will be convened during the month of January 1946 to conduct physical examination of naval and Marine Corps officer personnel of the regular services on the active list who will attain the age of 50 during the calendar year 1946, and those officers over 50 years of age, in order to determine their physical fitness to perform all duties at sea or in the field. One traveling board will be established on the west coast of the United States to meet at the Naval Hospital, San Diego; Naval Hospital, Long Beach; Naval Hospital, Treasure Island; and the Naval Hospital, Seattle, Washington. A similar board will be established on the east coast of the United States to meet at the Naval Hospital, National Naval Medical Center, Bethesda, Maryland; Naval Hospital, Chelsea, Massachusetts; Naval Hospital, Brooklyn, New York; Naval Hospital, Philadelphia, Pa.; Naval Hospital, Portsmouth, Va.; Naval Hospital, Charleston, S. C.; Naval Hospital, Jacksonville, Fla.; Naval Hospital, New Orleans, La.; and the Naval Hospital, Great Lakes, Ill.

2. The commandants of the several naval districts in the United States will inform the recorder of the nearest board as soon as possible the approximate number of officers who will require examination at each of the above locations, in order that the boards may prepare a schedule. The boards will then inform the commandants of the naval districts the dates when the board proposes to conduct examinations at each of the examination centers. When informed by the board of these dates the commandants will order officers under their jurisdiction to appear for examination at the nearest of the above examining points, regardless of whether it is in the same naval district.

3. The commanders of fleets and forces afloat and commandants of districts

outside the continental limits of the United States are hereby ^(Not Restricted) directed to convene similar boards to examine officers within their commands. Examinations shall be conducted when the services of officers can best be spared, to be completed as early as practicable during the calendar year 1946.

4. Officers on duty at the Navy Department, in the Potomac River Naval Command, or in the Severn River Naval Command will make appointments direct with the recorder of the special board, Naval Hospital, Bethesda, Md., obtaining travel orders, where necessary, from the appropriate authority.

5. It will be unnecessary to examine:

- (a) Officers of the retired list on active duty.
- (b) Officers who will reach the statutory retirement age of 64 during the calendar year 1946.
- (c) Officers who have been physically examined for promotion during preceding 6 months.
- (d) Nurses.
- (e) Reserve officers on active duty.

6. It is directed the boards be instructed as follows:

(a) The physical examination shall be conducted with a view to determining the physical fitness of the officer concerned to perform all the duties of his rank at sea, or in cases of officers in the Marine Corps at sea and in the field under war conditions. The purpose of the examination is to insure, insofar as possible, that senior officers who may be placed in positions of great command responsibility will be in all respects physically qualified for such positions.

(b) The board will be guided by the physical standards set forth in the Manual of the Medical Department, chapter 11, interpreted in the light of their clinical judgment and service experience. It is expected that wherever practicable the following procedures will be carried out routinely, complete blood count and sedimentation index; blood Kahn test; palpation of the prostate and microscopic study of expressed secretion; X-ray of the chest and cardiac mensuration; and electrocardiographic study. Whenever study is indicated and when the facilities are available the cardiac function during the anoxemia test should be ascertained.

(c) The boards will make full use of the special diagnostic facilities available in the naval hospital in which they conduct their examinations.

(d) Should conditions be discovered in any officer which cast a doubt on his physical fitness to perform all the duties of his rank at sea or at sea and in the field, the board should recommend hospitalization for further study. The board should acquaint each officer examined with its findings.

(e) The report of the board in each case will be submitted to the Bureau of Medicine and Surgery on NMS Form Y.

--BuPers. L. E. Denfeld.

To: All Ships and Stations.
 Subj: Annual Physical Examinations.

(Not Restricted)
 BuMed-RP-IMB
 A17-33, P2-5
 12 October 1945

Ref: (a) General Order 191, of 28 May 1943.

1. The annual physical examination required by reference (a) in the cases of those officers who have not had a complete physical examination during the year is hereby canceled for the calendar year 1945 in the cases of officers of the U. S. Naval Reserve, U. S. Marine Corps Reserve, retired officers on active duty, and officers of the Regular services on the active list who will reach the statutory retirement age of 64 during the calendar year 1945. The annual physical examination shall be conducted in the cases of all officers of the Regular Navy and of the Regular U. S. Marine Corps in accordance with the provisions of reference (a), excepting in the cases of those officers of the active list of the Regular Navy and of the Regular Marine Corps who are over 50 years of age or who will attain the age of 50 during the calendar year 1946. Inasmuch as this group of officers is to be given a thorough physical examination early in 1946, they are hereby exempted from taking the annual physical examination which is required during the calendar year 1945 under the provisions of reference (a). This special examination will not be given to officers of the retired list on active duty; nor to Reserve officers on active duty; nor to officers who will reach the statutory retirement age of 64 during the calendar year 1946.

2. A report of physical examination on NavMed-Y (NavMed-AV-1 in the case of qualified naval aviators) is to be forwarded to the Bureau of Medicine and Surgery only when defects are discovered which are regarded as sufficient to impair the examinee's ability to perform all his duties. Where local action is taken, or will be taken, to study or correct defects found, a notation shall be entered on the report showing the nature of such action as "transferred this date to USN Hospital..." "corrective action to be taken at first available opportunity," etc., thereby avoiding unnecessary correspondence.

3. In determining an officer's physical fitness for duty at sea or on foreign service, or at sea and in the field, medical examiners should bear in mind that, in general, an officer is considered physically qualified for all the duties of his rank or grade provided he is not limited physically in the performance of such duties and provided assignment to sea or overseas duty would not be particularly likely to have a deleterious effect upon his health. As a rule, the standards for promotion are to be used in making this determination; the standards for original appointment are not to be used. In those cases in which the officer's eligibility for assignment has been limited by action taken upon a report by a board of medical survey cognizance of such limitation should be taken in entering "findings and recommendation" on the NavMed-Y. In such cases the medical examiner should not make a finding that the officer concerned is physically

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qualified for full duty, for such a change in status can only be effected by appropriate action in the Navy Department. In the event an officer in this category is considered physically qualified for assignment to duty of a less restrictive nature, or to a full-duty status, an appropriate recommendation should be entered on the NavMed-Y.

4. Attention is invited to paragraph 5 of reference (a) in accordance with which the NavMed-H-8's (Medical History Sheets) containing entries are to be forwarded to the Bureau of Medicine and Surgery. Each NavMed-H-8 (Medical History Sheet) so forwarded shall have entered thereon the officer's file number, his full name, and the place and date of his birth. The letter transmitting these NavMed-H-8's need not contain a list of the names of the officers concerned. Where the NavMed-H-8's (Medical History Sheets) to be forwarded contain clinical data that may be of future use in interpreting subsequent examinations or in considering subsequent treatment or diagnoses, it is directed that the medical officer having custody of the Health Records enter a suitable abstract of the pertinent information on unused NavMed-H-8's which shall be retained in the Health Record permanently as a supplement to the Abstract of Medical History (NavMed-H-5). Such NavMed-H-5 supplements shall be marked, preferably in red, as follows: "Retain in Health Record permanently," and shall be inserted in the Health Record immediately preceding the NavMed-H-5 (Abstract of Medical History). In particular this abstract should contain the results of any special examinations not already recorded on the NavMed-H-3a; the action taken upon reports by boards of medical survey; the results of any special studies or laboratory reports not already recorded on an abstract; etc.

--MarCorps. A. A. Vandegrift.

--BuPers. L. E. Denfeld.

--BuMed. Ross T McIntire.

Approved:

--James Forrestal,
Secretary of the Navy.

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